

REMARKS

In the outstanding Office Action, claims 1-5 and 7-21 were presented for examination. Claims 14 and 20 were rejected under 35 U.S.C. §112. Claims 1-5 and 7-21 were rejected under 35 U.S.C. §103 as being unpatentable over Nomura et al. (U.S. Publication No. 2002/0081469) in view of various combinations of one or more of the following references: Nakayama et al. (U.S. Publication No. 2002/0148498); Iwasaki et al. (US Pre-Grant Publication 2002/0114988); and Sanderson (US Patent No. 6,989,209).

Concerning claims 14 and 20, applicant respectfully requests reconsideration as Figure 1 clearly shows that the exhaust of the SOFC is in fluid communication with the combustor 24 and the specification on page 11, lines 4-10 states that during “this phase of operation the combustor will not have to provide as much heat as the exhaust of the SOFC will be preheated”. In other words, heat exhaust of the SOFC is provided to the combustor during warm up, operation and after operation thus, dependent claims merely add the limitation of when the heat exhaust is being provided.

Therefore, applicant respectfully submits that claims 14 and 20 comply with 35 U.S.C. §112.

Turning now to the rejections of claims 1, 15 and 21 under 35 U.S.C. §103 over Nomura et al. (U.S. Publication No. 2002/0081469) in view of Nakayama et al. (U.S. Publication No. 2002/0148498). The Office Action has acknowledged that Nomura et al. fails to teach a thermo photovoltaic (TPV) cell that uses heat and other exhaust from the fuel cell stack to provide more power to the load on the system. However, the Office Action relies on Nakayama et al. which is directed to a TPV cell having a pipe 30 to be used in combination with the fuel cell system of Nomura et al. to form a rejection of independent claims 1, 15, and 21 under 35 U.S.C §103.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time

of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970).

MPEP 2143.01 reads, “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)” Furthermore, MPEP 2143.01 reads, “A statement that modifications of the prior art to meet the claimed invention would have been “well within the ordinary skill of the art at the time the claimed invention was made” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).”

The rejection of independent claims 1, 15, and 21 is respectfully traversed for at least the following reasons. The Nakayama et al. reference alone or in combination with the other cited references fails to teach or suggest all of the claim limitations. More specifically, Nakayama et al. fails to teach or suggest “at least one solid oxide fuel cell system ... said solid oxide fuel cell system producing heat waste; and at least one thermo photovoltaic device ...said thermo photovoltaic device providing said second source of power from said heat waste which is provided to a combustor for further heating” (claim 1) and “generating power from a solid oxide fuel system, said solid oxide fuel system generating a heat exhaust ... wherein said thermo photovoltaic device generates power from the heat from said combustor when said heat exhaust is heated by said combustor to a predetermined temperature for energy conversion by said thermo photovoltaic device” (claim 15) and “at least one solid oxide fuel cell system for providing a first source of power to a power conditioner...wherein the exhaust allows heated air to leave the solid

oxide fuel cell system; and at least one thermo photovoltaic device for providing a second source of power to the power conditioner... the combustor being fluidly coupled to the exhaust of the solid oxide fuel cell system... wherein an efficiency of the power system is increased... through the use of preheated air from the exhaust of the solid oxide fuel cell system in the combustor" (claim 21).

Nakayama et al. is only directed to a TPV device having an air inlet. Nakayama et al. does not teach or suggest a power supply with dual power generating sources as claimed in claims 1 and 21 or a method of generating power as claimed in claim 15.

The Office Action has suggested in part that it would be advantageous to use the combustor-TPV system of Nakayama et al. in the fuel cell system of Nomura et al. because the fuel cell system already contains a combustor and by substituting the combustor-TPV of Nakayama, the efficiency of the TPV would be increased and the overall system of Nomura et al. would be improved by using the waste heat of the fuel cell to create more power.

Applicant respectfully submits that this suggestion is based on impermissible hindsight reconstruction because the cited references provide no specific motivation or suggestion in using the combustor-TPV system of Nakayama et al. in the fuel cell system of Nomura et al in a manner claimed by claims 1, 15, and 21.

More specifically, there is simply no motivation to combine Nomura et al. and Nakayama et al. to provide a power generation system having two different power sources being provided by two separate devices (i.e. a solid oxide fuel cell system and a TPV device) wherein one of the two power sources (TPV device) is provided with heat waste from the other device (solid oxide fuel cell system) as claimed in claims 1 and 21 and claimed in method form in claim 15. Moreover, applicant asserts that Nakayama et al. provides no specific motivation or suggestion to use other sources of heat (i.e. heat waste from a solid oxide fuel cell system) to heat the air for combustion. Furthermore, the claimed device provides power efficiently in one operational aspect when one of the

two devices is not providing power (e.g., the warm up stage of the solid oxide fuel cell system). In other words, while the solid oxide fuel cell system is warming up, the TPV can provide power immediately upon request through the combustor, which is simply not taught or suggested by any of the references alone or combination. Applicant asserts that simply combining Nomura et al. and Nakayama et al. as suggested by the Office Action does not teach the dual power generating system as claimed nor is there any suggestion in any of the references of having such a system that performs in such a way.

For the foregoing reasons, applicant respectfully requests that the rejection of claims 1, 15 and 21 be withdrawn. Furthermore, dependent claims 2-5, 7-14 and 16-20 are also believed to be in a condition for allowance for at least the aforementioned reasons in addition to including additional limitations.

In view of the above amendments and the discussion relating thereto, it is respectfully submitted that the present application is in condition for allowance. Such action is most earnestly solicited. If for any reason the Examiner feels that consultation with applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below for an interview.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130, maintained by the applicant's attorney.

Respectfully submitted,

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